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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,572	07/20/2000	Alexander Ferguson	29699.010300	3887

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EXAMINER	
NALVEN, ANDREW L	

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/620,572	FERGUSON, ALEXANDER	
	Examiner	Art Unit	
	Andrew L. Nalven	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4, 9-12, 15-16, 18-28, 30-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,9-12,15,16,18-28 and 30-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 August 2004* is/are: a)☒ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-4, 9-12, 15-16, 18-28, 30-42 are pending.

2. The amendment submitted 24 February 2006 has been received and entered.

Response to Arguments

3. Applicant's arguments filed 24 February 2006 have been fully considered but they are not persuasive.

4. Applicant has argued on pages 9-10 that combination of the Glaser reference and the Tewfik reference is improper. Applicant has focused upon the teachings of Tewfik US Patent No. 6,442,283. However, Examiner notes that this reference was not relied upon in the rejection of claims 1, 9, 11, 15, 30, and 34-37. Instead, Tewfik US Patent No. 6,272,634 was relied upon and for this reason; Applicant's arguments regarding the combination are moot. Examiner wishes to note that, contrary to the assertion of Applicant, the 252 bit per second watermarking process and a 22kb compression rate for a file are not incompatible. Applicant asserts without support that a 252 bit per second watermark rate cannot work with a 22 kilobyte per second real time player. The 22 kilobyte rate is the compression rate of an audio file and this rate has nothing to do with the rate at which you can watermark an audio file. The compressing of an audio file and the watermarking of an audio file are distinct processes. The claims of the instant application support such a finding. Claim 1 provides the distinct steps of first converting a song into a compressed file (converting step) and then watermarking

the file (watermarking step). The speed at which these steps are completed is not relevant to the compatibility of the two steps.

5. Applicant has argued on page 10 that the cited references fail to teach the a system that "converts said signals to a digital format using a sampling rate and a resolution sufficient to insert a first digital watermark into each sample without degrading said sample; and inserts the digital watermark into each sample." Applicant's arguments regarding the Tewfik reference's failure to teach the above limitation are moot because Applicant has relied upon the incorrect reference. However, Tewfik '634 teaches "converts said signals to a digital format using a sampling rate and a resolution sufficient to insert a first digital watermark into each sample without degrading said sample; and inserts the digital watermark into each sample" (Tewfik, column 6 lines 33-40 "imperceptible watermarks", column 7 lines 5-17) by teaching imperceptible watermarking techniques being used. Glaser teaches the converting of signals into a digital format (Glaser, column 5 lines 47-52) by teaching an analog to digital converter receiving a live audio source.

6. Applicant argues on page 11 that the cited references fail to teach the inserting of a second watermark into the converted file prior to transporting that file to the user. Examiner respectfully disagrees. Tewfik '634 teaches the inserting of a second digital watermark into said converted file prior to transporting the file to said end user (Tewfik, column 6 lines 33-40, column 7 lines 5-17, Figure 3 "embedded second digital watermark") by teaching the embedding of a second digital watermark during the watermarking process.

7. Applicant has argued on page 11 that the cited references fail to teach the converting of the combined signal back to a plurality of digital signals and then covert the digital signals into a portable file that is closed each time a song or act is completed. Examiner respectfully disagrees. Glaser teaches the converting of the combined signal back to a plurality of digital signals (Glaser, column 7 lines 60-67) and then covert the digital signals into a portable file that is closed each time a song or act is completed (Glaser, column 7 line 60 – column 8 line 5, buffer) by teaching the decompressing of the combined signal (compressed signal) and the storing of the digital signals into a buffer.

8. Applicant has argued on page 12 against the combination of Glaser and Tewfik with Mouri by alleging that it would be a waste of processing power. Examiner respectfully disagrees. Mouri has been relied upon to teach the use of multiplexers in the combination of signals. Mouri provides ample motivation for combination by teaching that the multiplexers provide the advantages of allowing multiple audio signals to be used for a recording allowing the use of surround sound (Mouri, column 2 lines 54-55, column 3 lines 50-61). This advantage provides ample motivation for the combination to meet the prima facae case of obviousness.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 42 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim provides the limitation "inserting the first digital watermark that identifies said live performance into each sample" where there are *at least* 44,100 samples per second. The specification provides no teachings regarding the insertion of watermarks into greater than 44,100 samples per second.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1, 9, 11, 15, 30, 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glaser et al US Patent No 5,793,980 in view of Tewfik et al US Patent No 6,272,634.

12. With regards to claims 1, 9, 11-12, 15, Glaser teaches the capturing of a live performance (Glaser, column 5 lines 40-44), the converting of the signals to a digital format (Glaser, column 5 lines 47-52), the encoding of the digitally formatted signals into

a portable file (Glaser, column 6 lines 15-22), and the transporting of the portable file over a network (Glaser, column 6 lines 32-34, Figure 1 and 2A). Glaser fails to teach the inserting of a digital watermark using a sampling rate and a resolution sufficient to insert a first digital watermark into each sample without degrading said sample and inserting the first digital watermark into each sample. Tewfik teaches the inserting of a digital watermark using a sampling rate and a resolution sufficient to insert a first digital watermark into each sample without degrading said sample and inserting the first digital watermark into each sample (Tewfik, column 6 lines 33-40, column 7 lines 5-17). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Tewfik's method of inserting a watermark into a music file with either the invisible or subtle watermarking techniques because they offer the advantage of allowing data to be embedded into media that would help an owner prove ownership of the data in the event that it is illegally distributed (Tewfik, column 1 lines 49-58).

13. With regards to claim 12, Glaser as modified teaches the inserting of a digital watermark into multimedia data through a subtle method (Tewfik, column 6 lines 33-39).

14. With regards to claims 30, Glaser as modified teaches one of said levels of verification comprising a repeating code sequence that is encoded in said digitally formatted signals (Glaser, column 5 lines 16-18 and lines 40-45).

15. With regards to claims 34, Glaser as modified teaches a digital watermark comprising two or more levels of verification (Glaser, column 5 lines 40-47, x1, x2).

16. With regards to claims 35, Glaser as modified teaches one of said levels of verification comprising a repeating code sequence that is encoded in said digitally formatted signals (Glaser, column 5 lines 16-18 and lines 40-45).

17. With regards to claims 36, Glaser as modified teaches one of the levels of verification comprising a digital signature for said portable file as a whole (Glaser, column 5 lines 40-50, x2 using for hash function).

18. With regards to claims 37, Glaser as modified teaches the digital watermark not degrading the playback of the portable music file (Glaser, column 2 lines 42-44, imperceptible).

19. Claims 2-4, 10, 12, 28, 31-33 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glaser et al US Patent No 5,793,980 and Tewfik et al US Patent No 6,272,634, as applied to claims 1 and 9 above, and in further view of Patton et al US Patent No. 6, 078, 758.

20. With regards to claims 2 and 10, Glaser as modified teaches the receiving of the portable file (Glaser, column 25 lines 17-21), the publishing of the file for use by an end user (column 25 lines 30-36), and the transporting of the file to an end user (column 25 lines 37-56 and 19-29). Glaser as modified fails to teach the converting of the portable file to a format selected by said end user. Patton teaches the converting of the portable file to a format selected by said end user (Patton, column 6 line 61 – column 7 line 5). At the time the invention was made, it would have been obvious to a person of ordinary

skill in the art to utilize Patton's user selection method with Glaser as modified because it offers the advantage of providing more flexibility to the user in playing back audio segments (Patton, column 2 lines 17-25).

21. With regards to claim 3, Glaser as modified teaches the inserting of a second digital watermark into said converted file prior to transporting the file to said end user (Tewfik, column 6 lines 33-40, column 7 lines 5-17).

22. With regards to claims 4 and 12, Glaser as modified teaches the inserting of a digital watermark into multimedia data through a subtle method (Tewfik, column 6 lines 33-39).

23. With regards to claims 28, 33, and 41, Examiner takes official notice that the publishing of audio portable files is well known in the art and it would have been obvious to one of ordinary skill in the art to publish portable files on a CD because it offers the advantage of providing a high capacity storage medium that is easily distributable.

24. With regards to claim 31, Glaser as modified teaches one of the levels of verification comprising a digital signature for said portable file as a whole (Glaser, column 5 lines 40-50, x2 using for hash function).

25. With regards to claims 32, Glaser as modified teaches the digital watermark not degrading the playback of the portable music file (Glaser, column 2 lines 42-44, imperceptible).

26. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glaser et al US Patent No 5,793,980 and Tewfik et al US Patent No 6,272,634, as applied to claim 9 above, and in further view of Cook et al US Patent No 6,338,044.

27. With regards to claim 16, Glaser as modified fails to teach the portable file being of an MP3 or WAV type. Cook teaches a personal digital content system in which the portable files are of the type WAV and MP3 (Cook, column 3 lines 18-22). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Cook's suggested file encoding types because it offers the user a choice of a higher sound quality WAV file or the more compressed MP3 file that is more quickly downloaded over the Internet (Cook, column 1 lines 20-32).

28. Claims 18-19 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glaser et al US Patent No 5,793,980 in view of Mouri US Patent No 6,052,470.

29. With regards to claim 18, Glaser teaches a capture device which receives a plurality of analog signal and converts the signals to digital signals (Glaser, column 5 lines 40-55, Figure 2A), a processing unit for converting the combined signal to a digital signal (Glaser, column 5 lines 47-52), and a digital signal processor for a digital signal for converting a signal to a portable file (Glaser, column 6 lines 15-22). Glaser fails to specifically teach the use of a multiplexer for combining digital signals or the inclusion of a processing unit for converting the combined signal into a plurality of digital signals. Mouri teaches a system for processing audio surround sound including a multiplexer

connected to the capture device for combining digital signals into a combined signal (Mouri, column 19 lines 40-45) and a processing unit connected to the multiplexer via a single connector for converting the combined signal to a plurality of time-synchronized and locked digital signals (Mouri, column 19 lines 40-45 and 66-67). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include Mouri's multiplexer and processing unit because they offer the advantage of allowing multiple audio signals to be used for a recording allowing the use of surround sound (Mouri, column 2 lines 54-55, column 3 lines 50-61).

30. With regards to claim 19, Glaser as modified teaches the multiplexer and processing unit are in different physical locations (Glaser, Figure 2A, Mouri, Figure 18).

31. With regards to claim 25, Glaser teaches storing a combined signal (Glaser, column 6 lines 17-23, storing content). Glaser fails to teach the combining of signals. Mouri teaches the converting of the digitally formatted signals into a combined signal (Mouri, column 19 lines 40-45), converting the combined signal to a plurality of digital signals (Mouri, column 19 lines 66-67), and storing said plurality of digital signals into said portable file (Mouri, column 19 lines 45-56, modulation resultant signal to recording medium). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include Mouri's multiplexer and processing unit because they offer the advantage of allowing multiple audio signals to be used for a recording allowing the use of surround sound (Mouri, column 2 lines 54-55, column 3 lines 50-61).

32. With regards to claim 26, Glaser as modified teaches the plurality of digital signals being time-synchronized and locked (Mouri, column 19 lines 40-45 and 66-67)

33. With regards to claim 27, Glaser as modified teaches the plurality of digital signals can be extracted from the portable file (Mouri, column 19 lines 56-65, multiplexing resultant signal).

34. Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glaser et al US Patent No 5,793,980 and Mouri US Patent No 6,052,470, as applied to claim 18 above, and in further view of Tewfik et al US Patent No 6,272,634.

35. With regards to claim 20, Glaser as modified fails to teach the digital watermark being inserted into the portable file. Tewfik teaches the digital watermark being inserted into the portable file (Tewfik, column 7 lines 5-25). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Tewfik's method of inserting a watermark into a music file with either the invisible or subtle watermarking techniques because they offer the advantage of allowing data to be embedded into media that would help an owner prove ownership of the data in the event that it is illegally distributed (Tewfik, column 1 lines 9-33).

36. With regards to claim 21, Glaser as modified teaches a digital watermark comprising two or more levels of verification (Glaser, column 5 lines 40-47, x1, x2).

37. With regards to claim 22, Glaser as modified teaches one of said levels of verification comprising a repeating code sequence that is encoded in said digitally formatted signals (Glaser, column 5 lines 16-18 and lines 40-45).

38. With regards to claim 23, Glaser as modified teaches one of the levels of verification comprising a digital signature for said portable file as a whole (Glaser, column 5 lines 40-50, x2 using for hash function).

39. With regards to claim 24, Glaser as modified teaches the digital watermark not degrading the playback of the portable music file (Glaser, column 2 lines 42-44, imperceptible).

40. Claims 38-39 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glaser et al US Patent No 5,793,980 and Tewfik et al US Patent No 6,27,634, as applied to claim 1 above, and in further view of Gabriel Bouvigne's MP3 Glossary.

41. With regards to claims 38 and 42, Glaser as modified teaches all that is described above, but fails to teach a sampling rate greater than 44,100 samples per second and the resolution greater than 16 bits per sample. Bouvigne teaches a sampling rate greater than 44,100 samples per second and the resolution greater than 16 bits per sample (Bouvigne, page 2, Sample Rate and Bit Rate sections). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Bouvigne's sampling and resolution rates with Glaser as modified because it offers the advantage of offering a noticeable improvement in sound quality over lower quality sampling rates (Bouvigne, page 2, Sample Rate and Bit Rate sections).

42. With regards to claim 39, Glaser as modified teaches a sampling rate greater than 96,000 samples per second and the resolution of 24 bits per sample.

43. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glaser et al US Patent No 5,793,980, Tewfik et al US Patent No 6,272,634, and Patton et al US Patent No. 6, 078, 758, as applied to claim 2 above, and in further view of Cook et al US Patent No 6,338,044.

44. With regards to claim 40, Glaser as modified fails to teach the portable file being of an MP3 or WAV type. Cook teaches a personal digital content system in which the portable files are of the type WAV and MP3 (Cook, column 3 lines 18-22). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Cook's suggested file encoding types because it offers the user a choice of a higher sound quality WAV file or the more compressed MP3 file that is more quickly downloaded over the Internet (Cook, column 1 lines 20-32).

Conclusion

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Nalven whose telephone number is 571 272 3839. The examiner can normally be reached on Monday - Thursday 8-6, Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on 571 272 6962. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew Nalven